

1. An apparatus for managing errors in prefetched data, the apparatus comprising:

a prefetch module configured to prefetch data from a first location into a second location;

a validation module configured to determine that a prefetched data packet contains an uncorrectable error;

a transfer module configured to transfer the prefetched data packet from the second location; and

an error recovery module configured to selectively initiate an error recovery process for the transferred prefetched data packet that has been determined to contain an uncorrectable error.
2. The apparatus of claim 1, further comprising:

an identification module configured to associate an identifier with the prefetched data packet.
3. The apparatus of claim 2, wherein the identifier is stored in the second location with the prefetched data packet.
4. The apparatus of claim 1, wherein the validation module is further configured to store an address for the prefetched data packet within the first location.

5. The apparatus of claim 1, wherein the error recovery module is configured to set a flag in response to transfer of the prefetched data packet, and wherein the validation module is configured to signal an interrupt to initiate the error recovery process in response to the set flag.

6. An apparatus for managing errors in prefetched data, the apparatus comprising:

a request module configured to request a transfer of data from a first location by way of a communication bus;

a data transfer interface configured to prefetch the requested data from the first location into a second location prior to transferring the data to the request module across the communication bus, the data transfer interface further configured to determine that a prefetched data packet contains an uncorrectable error and to selectively initiate an error recovery process for the prefetched data packet if the prefetched data packet is transferred to the request module.

7. The apparatus of claim 6, wherein the data transfer interface comprises an identification module configured to associate an identifier with the prefetched data packet.

8. The apparatus of claim 7, wherein the data transfer interface is configured to signal an interrupt to initiate the error recovery process in response to the identifier.

9. The apparatus of claim 7, wherein the identifier is stored in the second location with the prefetched data packet.

10. The apparatus of claim 6, wherein the data transfer interface is further configured to store an address of the prefetched data packet within the first location.

11. A system for managing errors in prefetched data, comprising:
a memory interface module configured to prefetch data from a memory array to a temporary buffer;
a validation module in communication with the memory interface module, the validation module configured to determine whether the prefetched data contains an uncorrectable error;
a communication module in communication with the temporary buffer, the communication module configured to transmit the prefetched data from the temporary buffer across a communication bus to a requesting device; and
an error recovery module in communication with the communication module, the error recovery module configured to selectively initiate an error recovery process for prefetched data that contains an uncorrectable error and has been transmitted by the communication module.

12. The system of claim 11, further comprising:
an identification module configured to associate an identifier with prefetched data that contains an uncorrectable error.

13. The system of claim 12, wherein the identifier is stored in the temporary buffer with the prefetched data that contains an uncorrectable error.

14. The system of claim 11, wherein the validation module is further configured to store an address that contains an uncorrectable error within the memory array of the prefetched data.

15. The system of claim 11, wherein the error recovery module is further configured to set a flag in response to transmission of prefetched data that contains an uncorrectable error, and wherein the validation module is configured to signal an interrupt to initiate an error recovery process in response to the flag.

16. A method for managing errors in prefetched data, the method comprising:
prefetching data from a first location into a second location;
determining that a prefetched data packet contains at least one
uncorrectable error;
determining that the prefetched data packet in the second location has been
transmitted for an intended use; and
selectively initiating an error recovery process only for the prefetched data
packet that contains at least one uncorrectable error and has been
transmitted for an intended use.

17. The method of claim 16, further comprising associating an identifier with the prefetched data packet.

18. The method of claim 17, further comprising signaling an interrupt to initiate the error recovery process in response to the identifier for the prefetched data packet.

19. The method of claim 17, further comprising storing the identifier in the second location with the prefetched data packet.

20. The method of claim 16, further comprising storing an address for the prefetched data packet within the first location.

21. The method of claim 16, further comprising:
setting a flag in response to transmission of the prefetched data packet; and
interrupting a data transfer of prefetched data in response to the flag.

22. An apparatus for managing errors in prefetched data, comprising:
means for prefetching data from a first location into a second location;
means for determining that a prefetched data packet contains at least one
uncorrectable error;
means for determining that the prefetched data packet in the second
location has been transmitted for an intended use; and
means for selectively initiating an error recovery process only for the
prefetched data packet that contains at least one uncorrectable error
and has been transmitted for an intended use.

23. The apparatus of claim 22, further comprising means for associating an identifier with the prefetched data packet.

24. The apparatus of claim 23, further comprising means for signaling an interrupt to initiate the error recovery process in response to the identifier for the prefetched data packet.

25. The apparatus of claim 23, further comprising means for storing the identifier in the second location with the prefetched data packet.

26. The apparatus of claim 22, further comprising means for storing an address within the first location for the prefetched data packet.

27. An article of manufacture comprising a program storage medium readable by a processor and embodying one or more instructions executable by a processor to perform a method for managing errors in prefetched data, the method comprising:

prefetching data from a first location into a second location;

determining that a prefetched data packet contains at least one
uncorrectable error;

determining that the prefetched data packet in the second location has been
transmitted for an intended use; and

selectively initiating an error recovery process for the prefetched data
packet that has been determined to contain at least one
uncorrectable error and has been transmitted for an intended use.

28. The article of manufacture of claim 27, wherein the method further comprises associating an identifier with the prefetched data packet.

29. The article of manufacture of claim 28, wherein the method further comprises signaling an interrupt to initiate the error recovery process in response to the identifier for the prefetched data packet.

30. The article of manufacture of claim 29, the method further comprising storing an address for the prefetched data packet within the first location.

KUNZLER & ASSOCIATES
ATTORNEYS AT LAW
10 WEST 100 SOUTH, SUITE 450
SALT LAKE CITY, UTAH 84101